

3.1

Periodic Behaviour



Modeling With Graphs

You have modeled many real-world phenomena using graphs or tables.

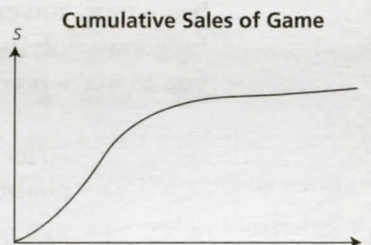
Example

Sketch a graph that models the following situation. It is not necessary to include a scale on this graph.

The cumulative sales of a new electronic game gradually increased until a more exciting game was introduced into the market.

Solution

Example

**Focus Questions**

1. In the graph above, what are the independent and dependent variables?
2. Match each situation with an appropriate graph chosen from the graphs that follow. Dependent and independent variables are identified for each situation.
 - (a) The depth of the water in a port along the Bay of Fundy changes as a result of tides. The depth of the water is the dependent variable; time is the independent variable.
 - (b) You purchase flour in bulk. The cost is the dependent variable; the weight of the flour purchased is the independent variable.
 - (c) Jim tries bungee jumping at a carnival in Truro. Jim is suspended in a basket 40 m above the ground. Jim's height above the ground in metres is the dependent variable; time in seconds is the independent variable.
 - (d) This container is filled with water from a tap at a constant rate. The depth of the water is the dependent variable; time is the independent variable.

